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HONG KONG'S REVERSION TO CHINA

Effective Monitoring Critical to Assess U.S. Nonproliferation Risks



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National Security and
International Affairs Division

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Chairman, Committee on National Security
House of Representatives

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Hong Kong will revert to Chinese sovereignty on July 1, 1997, after over a century of rule by the United Kingdom. As the reversion date approaches, increasing attention has focused on how the territory will fare under China and how U.S. economic and security interests could be affected. U.S. economic presence in the territory is substantial, and Hong Kong's fate has significant implications for broader U.S.-China relations.

You asked us to focus on one key issue—whether U.S. export control policy toward Hong Kong will adequately protect U.S. national security and nonproliferation interests after Hong Kong's reversion to China. You raised concerns about the potential risks and consequences of continuing to export sensitive technologies to the territory after reversion, given China's past proliferation behavior. This report outlines (1) how U.S. export controls are currently applied to Hong Kong as compared with China, (2) planned U.S. export control policy toward Hong Kong after reversion, and (3) possible safeguards and monitoring efforts to protect U.S. nonproliferation interests.

Background

The People's Republic of China and the United Kingdom agreed to the terms of Hong Kong's reversion in their 1984 Joint Declaration. The declaration calls for Hong Kong to become a Special Administrative Region of China that will "enjoy a high degree of autonomy" except in the conduct of defense and foreign affairs. Under the "one country, two systems" formulation, Hong Kong will remain a separate customs territory and retain its status as a free port. Hong Kong's status is to remain unchanged for 50 years. China's National People's Congress subsequently enacted the "Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China" to codify in Chinese law the status of Hong Kong and to implement the understandings in the Joint Declaration.

The United States-Hong Kong Policy Act of 1992 (P.L. 102-383, Oct. 5, 1992) articulated U.S. support for full implementation of the Sino-British Joint Declaration. The act called upon the U.S. government to continue to treat Hong Kong as a separate territory with respect to economic and trade matters and to support Hong Kong's continued access to sensitive technologies so long as such technologies are protected. Furthermore, the act directed that U.S. laws continue to apply to Hong Kong on or after July 1, 1997, in the same manner as before that date. Nevertheless, under the act, if the President determines that Hong Kong is not sufficiently autonomous to justify different treatment from China under a particular law, he may change the way in which that law is applied to Hong Kong. Finally, the act required the Secretary of State to provide Congress with periodic reports on conditions in Hong Kong, including any significant problems in cooperation between Hong Kong and the United States on export controls.¹

The U.S. government controls exports of dual-use items (items primarily for civilian use but that also have potential military applications) and munitions items (defense articles and services) with the goal of protecting U.S. national security and nonproliferation interests. The Commerce Department is responsible for administering controls over dual-use items, which are grouped into categories such as "telecommunications software" and "lasers and optical equipment." Pursuant to the Export Administration Regulations, items are controlled for various reasons, including national security; missile technology; and nuclear, chemical, and biological weapons proliferation concerns. High-performance computers are also controlled. Generally, exporters must apply to the Commerce Department for a license to export controlled items. In reviewing license applications, Commerce—in consultation with the Departments of State, Defense, and Energy and the Arms Control and Disarmament Agency, which are authorized to review these applications—assesses the risk the items could pose to U.S. national security and nonproliferation interests and approves or disapproves exports accordingly. In some cases, depending on the item involved and the country of destination, an exporter may not be required to obtain prior Commerce approval to export the items. The State Department has jurisdiction over munitions items and reviews license applications, in consultation with the Department of Defense and other agencies, for the export of all such items. License applications are

¹A bill (H.R. 750), passed by the House of Representatives on March 11, 1997, incorporates additional reporting requirements, including any "failure to enforce United States export control laws or export license requirements" and any "unauthorized diversions from Hong Kong of high technology exports from the United States to Hong Kong."

reviewed for consistency with U.S. foreign policy goals, including nonproliferation, among others.

Results in Brief

U.S. export control policy toward Hong Kong is less restrictive than that applied to China, based on Hong Kong's ability to protect sensitive technologies as well as concerns over China's proliferation activities. The U.S. government allows Hong Kong greater and easier access to sensitive dual-use technologies; many items may be exported to Hong Kong without prior Commerce Department review and, even when prior approval is necessary, licenses are readily granted. Thus, exporters may export items such as titanium alloys, certain types of machine tools, and high-performance computers to Hong Kong without obtaining an export license. In contrast, the export control rules applied to China are more stringent: more categories of exports require licenses, and the U.S. government has refused to export certain items owing to concerns over proposed end users and end uses. In about 30 instances over the past 3 years, items that the United States has refused to export to China could have been exported to Hong Kong without prior U.S. government review or approval.

The U.S. government does not plan to change its export control policy toward Hong Kong after it reverts to China unless there is evidence that the Hong Kong authorities are unable to continue to operate an effective export control system. As a result, Hong Kong will continue to have easier access to sensitive technology that is more tightly controlled for China. Major reasons for this decision include (1) the Hong Kong Policy Act, which calls for continued separate treatment of Hong Kong in export controls so long as it is able to protect U.S. technology and equipment, (2) the U.S. government's overall commitment to supporting Hong Kong's continued autonomy, and (3) Hong Kong's record in maintaining an effective export control system.

Given the decision to continue current U.S. policy toward Hong Kong, monitoring various indicators of Hong Kong's continued autonomy in export controls becomes critical to assessing the risk to U.S. nonproliferation interests. This may not be an easy task, given the changes that could occur in Hong Kong and the difficulties in gauging Chinese intentions and behavior. Key indicators to watch would be changes in the composition and volume of U.S. exports of controlled items to Hong Kong, which could signal efforts by China to obtain sensitive technology such as optical sensors that it has previously been denied. The U.S. government

has begun a process to develop a baseline of export data against which to measure such changes but may have difficulty in doing so because of data limitations. Also, the U.S. government intends to monitor all aspects of Hong Kong's export control system as a basis for assessing changes that might occur and has established an interagency group to do so.

Current U.S. Policy and Practice Toward Hong Kong and China Differ Significantly

The United States applies different licensing policies and standards to Hong Kong and China because of Hong Kong's ability to maintain an effective export control system—as evidenced by its adherence to the standards of various multilateral export control regimes—and concerns over China's proliferation and military activities. As a result, Hong Kong receives preferential licensing treatment—for many categories of dual-use items, exporters do not need to submit license applications to obtain prior U.S. government approval. Further, approval is generally granted even when a license is required. In contrast, dual-use exports to China receive greater scrutiny, and more than 170 license applications were denied over the past 3 years. Lastly, Hong Kong generally is eligible to obtain munitions items, while current sanctions generally preclude issuing licenses to China for munitions items without a presidential waiver.

Policy Basis for Preferential Treatment

The United States extended preferential licensing treatment to Hong Kong in 1992 as a result of Hong Kong's designation as a Coordinating Committee for Multilateral Export Controls (cocom)² "cooperating country"—meaning that Hong Kong had established an export control system containing the necessary elements of effective control. Hong Kong then became eligible for treatment equivalent to that accorded cocom members such as Australia and Japan.

Hong Kong currently adheres voluntarily to the prevailing standards of all the multilateral export control regimes. It obtains regime control lists and incorporates them into its own regulations, thereby agreeing to control the same items that regime members control. In return, Hong Kong obtains specific privileges—preferential licensing treatment and information sharing. Because Hong Kong is not a state, it cannot be a member of these regimes, but Hong Kong government representatives have participated in regime plenary sessions as part of the British delegation. Hong Kong has agreed to adhere to the standards of the following regimes:

²COCOM was created in 1949 by the United States and its allies to coordinate controls over exports to the Soviet Union and other communist countries. COCOM was dissolved in March 1994 and has been succeeded by the 1996 Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies.

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- Australia Group, focused on chemical and biological weapons proliferation;
 - Missile Technology Control Regime, targeting missile proliferation;
 - Nuclear Suppliers Group, addressing dual-use nuclear items; and
 - Wassenaar Arrangement, focused on conventional arms and dual-use items.

In contrast, China, although a signatory to the Nuclear Nonproliferation Treaty, is not a member of any of these regimes. It unilaterally has declared its adherence only to the provisions of the 1987 Missile Technology Control Regime.³ Moreover, U.S. policy restricts the export or reexport of dual-use items that would make a significant contribution to the military potential of countries such as China that would prove detrimental to U.S. national security.

Different U.S. Licensing Treatment for Hong Kong and China

The United States has extended more favorable licensing treatment to Hong Kong in two basic ways. First, exporters may export various dual-use items to Hong Kong without obtaining a license—this is true for a range of items controlled for national security reasons, certain high-performance computers, and some items controlled for chemical and biological reasons. China's eligibility for such "license free" treatment is more restricted, in recognition of the greater risk that exports of controlled items could pose. Second, in cases where items do require a license for export to Hong Kong, licenses typically have been granted, whereas licenses for China have in some cases been denied.

Differences in Eligibility for Exports Without a License

Hong Kong is eligible to receive, without a license, items in 72 of 154 categories of dual-use items controlled for national security reasons.⁴ For 36 of the 72 categories, the U.S. government has determined that no review is necessary prior to export, under the designation "no license required." In these cases, exporters do not have to obtain licenses to export the items. Hong Kong is also eligible for several types of license exceptions for items in 34 other categories.⁵ Eligibility for license exceptions is based essentially on the item, the country of ultimate destination, and the end

³China has not agreed to adhere to any of the subsequent changes to the regime's control lists and guidance.

⁴The remaining 82 categories either (1) require a license for export to Hong Kong for national security reasons or other reasons such as nonproliferation concerns or (2) do not require a license for exports to Hong Kong of some items for national security reasons but do require a license for other items for other reasons.

⁵For example, one of these license exceptions covers exports of certain technology and software.

use and end user. If the exporter determines that the conditions for a license exception have been met, the item may be exported without a license. The remaining 2 categories (of the 72) include some items that require a license and some that do not.

In contrast, China is not entitled to obtain any national security items on a no-license-required basis. Moreover, China is eligible for only one type of license exception. This "civil end use" exception authorizes exports and reexports of national security-controlled items only to civil end users for civil end uses; exports to military end users or to known military uses still require a license.

Differences also exist in how computer exports to Hong Kong and China are controlled. Both are eligible for license exceptions, but the Export Administration Regulations place the two under different country groups called "computer tiers." Hong Kong's classification under "tier 2" makes it eligible to receive—without a license—computers with a composite theoretical performance of up to 10,000 millions of theoretical operations per second (MTOPS).⁶ In contrast, China's classification under "tier 3"⁷ requires companies to obtain an export license when the computers (1) are intended for a military end user or an end user involved in proliferation activities and have a composite theoretical performance of over 2,000 MTOPS or (2) are intended for a civilian end user and have a composite theoretical performance of over 7,000 MTOPS. In addition, the license exception prohibits exports to any country in tier 3 for military, nuclear, chemical, biological, or missile end users and end uses. Retransfers to military and defined proliferation end users and end uses in otherwise eligible countries are also strictly prohibited without prior authorization. Computers exported under a license exception are not required to have a computer safeguards plan restricting use and access.

A specific case illustrates the practical application of these different standards. In December 1996, a U.S. exporter shipped a high-performance computer with a performance level of about 8,800 MTOPS to a Hong Kong university. Because Hong Kong is under tier 2 standards, and because the computer's performance level was under 10,000 MTOPS, the exporter was able to ship it without a license and without a safeguards plan to guard

⁶Composite theoretical performance is a measure used to estimate the maximum possible performance of a computer as measured in millions of theoretical operations per second.

⁷Tier 3 includes certain nuclear weapons states and other countries of proliferation concern, such as China, Russia, India, Pakistan, and Israel.

against improper use.⁸ However, this computer's performance level would preclude it from export to China without a license, even to civilian users or for civilian uses.

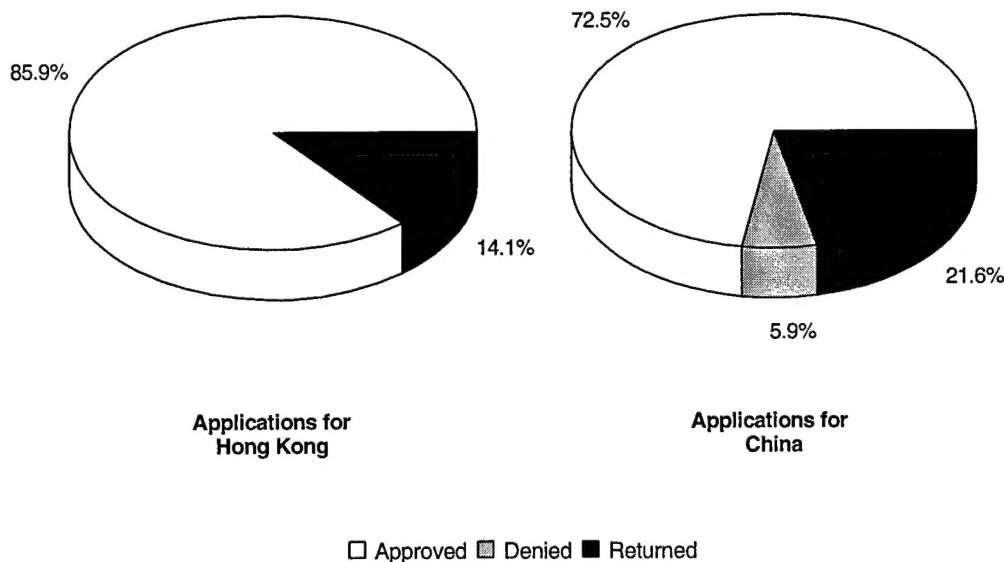
Hong Kong is treated differently from China in one other area: technology and equipment controlled for biological and chemical proliferation reasons in six categories. The U.S. government does not require licenses for exports of such items to Hong Kong because it is not a country of concern for chemical and biological weapons proliferation. China, however, must obtain licenses for exports of items in these categories.

Differences in License Review When Licenses Are Required

Other items—for example, those controlled for nuclear nonproliferation and missile technology reasons—require licenses for export to both Hong Kong and China. The difference lies in how license applications are reviewed—Hong Kong is viewed more favorably than China in deciding whether to approve a license, according to Commerce officials. When reviewing license applications, Commerce officials said they consider the risk of diversion, whether the destination country has a nuclear or missile program, whether it belongs or adheres to control regimes, the strength of the country's own export controls, and the stated end use and end user. The standards for approval to Hong Kong are different than for China, in part because Hong Kong does not have a known or suspected nuclear weapons or missile development program. According to Commerce officials, the most likely reason an item would be denied to Hong Kong is if Commerce believed there was a risk of diversion based on the end user or other information.

Data on license applications for dual-use exports to Hong Kong and China illustrate the differences in licensing review. From fiscal years 1994 through 1996, the Commerce Department approved 431 license applications for Hong Kong valued at \$870 million and denied none; an additional 71 license applications were returned without action (meaning that the exporter failed to provide sufficient information or withdrew the application, or Commerce determined that the item did not require a license). During the same period, Commerce approved 2,146 licenses for China (valued at \$2.8 billion); denied 176; and returned 640. Figure 1 shows the relative proportions of these licenses approved, denied, and returned without action for Hong Kong and China.

⁸According to a representative of the computer manufacturer, a safeguards plan will be implemented if the U.S. government approves a license for a planned upgrade to the computer to go beyond 10,000 MTOPS.

Figure 1: Licensing Decisions for Hong Kong and China, Fiscal Years 1994-96

Source: Department of Commerce.

Further, the U.S. government has denied license applications for controlled items to China that it has approved for export to Hong Kong. We identified four cases where the U.S. government refused to approve items for export to China that exactly matched the descriptions of items it approved for export to Hong Kong, including oscilloscopes of specified standards. The actual number of items denied for export to China that were approved for export to Hong Kong during fiscal years 1994 through 1996 could be much greater—our search of data from Commerce's data base identified 14 categories that included items denied for China but approved for Hong Kong.⁹

In response to our request, Commerce also identified 29 cases where items denied for export to China would not even have required a license for

⁹Our methodology—identifying matches based on exact item descriptions in Commerce's data base—was constrained by variations in how data are entered into the data base and therefore did not allow us to identify other matches that could be determined only through additional technical review.

export to Hong Kong, as shown in table 1. Commerce Department officials noted that the Department denied many of these applications because of concerns over end users.

Table 1: Applications Denied for China That Did Not Require a License for Hong Kong, Fiscal Years 1994-96

Category number	Description	Number of applications denied
1A003	Manufactures of nonfluorinated polymeric substances controlled under another category (1C008.a), in film, sheet, tape, or ribbon form	1
1C002	Metal alloys, metal alloy powder, or alloyed materials	1
3A001	Electronic devices and components	3
3A002	General purpose electronic equipment	13
3B01 ^a	Equipment for the manufacture or testing of semiconductor devices or materials	2
3C001	Hetero-epitaxial materials consisting of a "substrate" with stacked epitaxially grown multiple layers	1
3C004	Hydrides of phosphorus, arsenic, or antimony, purity better than 99.99 percent	1
4A003	Digital computers, "electronic assemblies," and related equipment and specially designed components	2
6A005	Lasers, components, and optical equipment	3
6C002	Optical sensors	2
Total		29

^aThis was the category and description in use at the time the licenses were denied; the category has since been divided into eight separate categories.

Source: Department of Commerce.

Differences in Treatment of Munitions Items

Another difference in U.S. treatment of exports to Hong Kong and China concerns access to munitions items. Hong Kong is eligible to obtain export licenses for munitions items, which are reviewed by the Department of State on a case-by-case basis. China, however, is generally not eligible to obtain munitions items because of sanctions the United States imposed in response to the June 1989 massacre at Tiananmen Square. The sanctions include suspension of (1) all exports of munitions items to China, except for items for inclusion in civil products not intended for the Chinese military or security forces¹⁰ and (2) licenses for the export of any

¹⁰The Tiananmen Square sanctions (P.L. 101-246) provide that munitions licenses may be issued for "systems and components designed specifically for inclusion in civil products and controlled as defense articles only for purposes of export to a controlled country, unless the President determines that the intended recipient of such items is the military or security forces of the People's Republic of China."

U.S.-manufactured satellites for launch on launch vehicles owned by China. The President can waive either of these suspensions.¹¹

During the period 1994-96, the U.S. government licensed munitions exports to Hong Kong valued at about \$307.4 million. Encryption machines and equipment comprised over half of this amount, ahead of other major categories including manufacturing and technical assistance agreements, computer memory, and helicopters. In the same period, the United States licensed munitions exports to China valued at about \$284 million. Satellites and satellite equipment, licensed under sanctions waivers, made up over three quarters of the total, followed by such categories as encryption machines and equipment and software.

U.S. Policy for Treatment of Hong Kong After Reversion

The U.S. government intends to accord Hong Kong the same export control treatment after reversion as it does now, so long as its export control system remains effective. This policy derives from the U.S. government's overall commitment to support Hong Kong's future autonomy in economic and trade matters and is articulated in the Hong Kong Policy Act.

Other countries—specifically Australia and Japan—plan to continue their current practice of requiring licenses for exports of all controlled items to both Hong Kong and China. The United Kingdom's policy parallels that of the United States—the United Kingdom treats Hong Kong and China differently for export control purposes and has no current plans to change that policy after reversion.

Basis for Maintaining Existing Export Control Policy

The Hong Kong Policy Act allows the United States to continue to maintain separate export control requirements for Hong Kong and China after reversion. The act stipulates that the United States should continue to treat Hong Kong as a separate territory in economic and trade matters. The act also specifically calls on the U.S. government to "continue to support access by Hong Kong to sensitive technologies . . . for so long as the United States is satisfied that such technologies are protected from improper use or export."

State Department officials stated that the Hong Kong Policy Act signals U.S. support for the agreement between China and the United Kingdom to

¹¹In fact, the President has on occasion waived sanctions to allow exports of munitions items, mainly in support of satellite projects to be owned or operated by other countries or by multinational telecommunications corporations.

preserve Hong Kong's autonomy. State officials noted that, in the absence of any evidence that Hong Kong's export control system is not working effectively, the State Department would not support a preemptive decision to modify existing U.S. export control policy. To do so could risk becoming a "self-fulfilling prophecy" that would result in less autonomy for Hong Kong. State Department officials also said that the U.S. government is committed to support Hong Kong's separate export control regime and to work closely with the Hong Kong government to achieve that end.

Effectiveness of Hong Kong's Export Control System Is Key to Maintaining Status Quo

Hong Kong's ability to maintain its own effective export control system is key to meeting the guideline in the Hong Kong Policy Act that U.S. sensitive technologies be "protected from improper use or export." Hong Kong government officials have said that Hong Kong is committed to adopting the highest international standards for its strategic trade control system and views the control of strategic trade as both an obligation and an opportunity. In their view, Hong Kong needs to ensure that it is not used as a conduit for diversion of sensitive technology while maintaining an effective control system that facilitates Hong Kong's access to technology and in turn its continued economic growth and competitive edge.

In 1992 the United States and other former COCOM members designated Hong Kong a "cooperating country" with an export control system possessing the necessary elements of an effective licensing and enforcement system. Among other things, these elements included establishing a legal basis for controls, providing licensing review and screening, using pre- and post-license checks, undertaking enforcement efforts, and engaging in international cooperation. U.S. government officials told us Hong Kong continues to have a strong control system; that system is characterized by the following:

Legal basis for controls. The Hong Kong Import and Export Ordinance and the accompanying Import and Export Regulations form the legal basis for the import and export of strategic commodities. All imports, exports, transshipments, and certain more sensitive in-transit shipments of controlled items must be licensed. The Hong Kong government believes that the requirement for both import and export licenses has provided a double-checking mechanism on the inflow and outflow of all strategic commodities. Even if goods are imported for subsequent reexport or transshipment, both import and export licenses are required. The

ordinance also provides the Hong Kong Director-General of Trade with the authority to approve licenses and the Commissioner of Customs and Excise with the authority to carry out enforcement activities.

License review. License applications for strategic items are subject to various reviews, including item classification to determine whether the items are controlled, for what reason, and their technical capabilities. Licenses also go through risk assessments to determine whether (1) there is any risk of diversion, (2) the technical capabilities of the items are suitable for the declared end use, and (3) the end use is acceptable and believed to be genuine. License applications may also be subject to further review by an interagency group, which examines more difficult cases and can impose conditions for approval of licenses. To assist in screening license applications, the Hong Kong Trade Department maintains a data base that has the capability to track the issuance of import and export licenses and those licenses referred to Customs for consignment and disposal checks. The data base can also track the licensing histories of companies on the Hong Kong government "watchlist" of target companies.

License checks. Hong Kong Customs and Trade Departments conduct consignment checks for exports and disposal checks for imports that are to remain in Hong Kong. Consignment checks are carried out to ensure that reexports are legitimate and properly authorized. Disposal checks are conducted to ensure that the goods imported will be used locally as declared and no diversion has occurred.

Enforcement. According to U.S. Customs officials in Hong Kong, the Hong Kong authorities have demonstrated excellent cooperation with the United States on export enforcement activities, including sharing of information and cooperation on investigations, searches, and seizures of suspected illegal shipments. In 1996, for example, Hong Kong Customs, acting on information from U.S. Customs, intercepted a Chinese vessel and seized an unlicensed in-transit shipment of a rocket fuel chemical, ammonium perchlorate, which is a controlled item. The shipment was reportedly exported from North Korea via Hong Kong for shipment to the Pakistan Space and Upper Atmosphere Research Commission.

International cooperation. Hong Kong adheres voluntarily to the current standards of all the nonproliferation regimes and reviews its strategic control list regularly to reflect the most updated lists agreed to by these regimes.

The Hong Kong government has also been taking several steps to improve its export control system, including the following:

Arranging for technical advisors from other countries. The Hong Kong government has sought the temporary assignment of export control advisors from its major trading partners to assist in license reviews. A U.S. Commerce Department official is presently in Hong Kong working with the Trade Department on a 6-month detail. The advisor has provided technical guidance on licensing issues, classification of items, and U.S. export controls. The Hong Kong government has had discussions with Australia and Japan about the possibility of either country providing the next advisor.

Fostering Hong Kong's relationships with multilateral regimes. The Hong Kong government intends to continue to update its control lists to make sure they conform to the lists maintained by the multilateral control regimes. Because the Hong Kong government will no longer be able to participate directly in the various regimes as it has in the past, Hong Kong has been working with the United States, the United Kingdom, Australia, and Japan on arrangements that would keep Hong Kong informed of the latest developments in these regimes. The intent is for individual countries to take the lead in informing Hong Kong about the activities of a particular regime—for example, Australia would take the lead in advising Hong Kong of changes in Australia Group control lists. Hong Kong government officials also believe that it is critical for Hong Kong to continue to receive intelligence and information such as country notifications of license denials. On a bilateral basis, Hong Kong has been discussing with the United States and other countries how to obtain such information.

Establishing contacts with worldwide networks of technical experts. The Hong Kong government has also sought to establish a network of professional and technical experts worldwide. Additionally, the Hong Kong government has also shared experiences and views with other countries in the region, such as at the January 1997 Asian Export Control Seminar in Tokyo.

Upgrading data capability. Hong Kong's Trade Department is upgrading its computer system to allow it to generate information reports with detailed breakdowns by country and product type for both import and export licenses.

Considering brokering legislation. The Hong Kong government has also been considering the enactment of laws against brokerage of illegal weapon deals. The proposed brokering legislation would allow prosecution of trade middlemen who make deals for controlled items even if the items never actually enter Hong Kong itself. U.S. export control officials would like to see legislation enacted before reversion.

Export Control Policies of Other Governments

Australia and Japan, two of Hong Kong's other major trading partners, plan to continue their current policy and practice of reviewing all dual-use exports to both Hong Kong and China. According to Australian and Japanese officials, neither country currently permits exports of controlled items to Hong Kong without a license, and the two countries plan to continue this practice after Hong Kong's reversion. For example, under Japan's export control system all items are controlled to all destinations, and Japan does not export controlled items to Hong Kong without a license. According to Japanese officials, exports of controlled items for China receive greater scrutiny during the review process.

According to British officials, current British export control policies and restrictions affecting Hong Kong and China are similar to U.S. policies. Thus, items that require a license for export to China may not require a license for export to Hong Kong. According to a representative of the British embassy in Washington, D.C., as of April 1997 the British government had no plans to change this policy after Hong Kong's reversion.

Monitoring Critical to Assess Risks, but Data to Track Exports Could Be Limited

As noted previously, the U.S. government is committed to continuing its existing export control policy toward Hong Kong, consistent with the provisions of the Hong Kong Policy Act, as one means of demonstrating support for Hong Kong's autonomy. Nonetheless, uncertainty remains over China's intentions toward Hong Kong and, therefore, the level of risk the United States may be incurring in continuing to export sensitive technologies to Hong Kong. Consequently, monitoring controlled exports to Hong Kong after the transition—as well as assessing other indicators—becomes critical to detecting any heightened risks to U.S. national security and nonproliferation interests. However, the U.S. government has not identified the full range of sensitive items that have been exported to Hong Kong. Without accurate data, the U.S. government will be unable to construct baselines against which to measure changes in exports.

Uncertainties and Potential Risks

Various factors contribute to a level of uncertainty in assessing potential risks to U.S. nonproliferation interests once Hong Kong reverts to China. These include the nature of China's commitment to an autonomous Hong Kong export control system, China's overall nonproliferation credentials, and varying judgments over the nature and severity of the current risk of Chinese diversions of U.S. technology from Hong Kong. If the integrity of Hong Kong's export control system cannot be maintained, the consequences could be (1) a greater opportunity for China to obtain U.S.-controlled technology and (2) increased attempts by China and others to use Hong Kong to circumvent international controls on technology transfer.

China's Reported Perspective on Hong Kong's Export Control System

China has taken no formal, public position on the issue of whether Hong Kong can maintain a separate export control system. The Hong Kong government interprets export controls to be a trade matter (thus falling under the provisions of the Basic Law and the Joint Declaration providing for Hong Kong's autonomy in economic and trade matters) but has not sought Chinese agreement for that interpretation. Nonetheless, Hong Kong officials point to informal statements by two Chinese government officials indicating that China will not challenge Hong Kong's autonomy in this area. Hong Kong officials also note that, more importantly, China has not ruled that Hong Kong's Import and Export Ordinance—the basic statute governing export controls—is in violation of the Basic Law. They consider this significant in view of the recent determination, by the Standing Committee of China's National People's Congress, that various other Hong Kong laws do contravene the Basic Law. (Under article 160 of the Basic Law, China effectively has the right to amend or repeal Hong Kong laws that are later found to be inconsistent with the Basic Law. Article 158 of the Basic Law gives the Standing Committee the power to interpret the Basic Law.)

Questions remain about Hong Kong's ability to maintain an independent export control system after reversion. A 1997 classified study on Hong Kong's export control system prepared by the U.S. interagency group charged with monitoring Hong Kong's export controls noted that one of the biggest questions the United States faces is whether the Hong Kong government would continue to assert that its autonomy in economic matters gives it the authority to block shipments from Hong Kong to Chinese government-linked entities.

Chinese Proliferation Behavior

China's overall proliferation record is cause for concern, thereby contributing to the uncertainty of future Chinese government behavior

toward Hong Kong. The U.S. government has on numerous occasions taken issue with Chinese proliferation activities, including

- missile technology violations for which the United States issued two sanctions,¹²
- violations of the Nuclear Nonproliferation Treaty and the Biological Weapons Convention,
- transfers of chemical weapons-related technology to the Middle East,
- sales of conventional arms such as antiship cruise missiles to Iran, and
- a diversion of controlled machine tools in China.¹³

Concerns Over Diversions From Hong Kong

Various U.S. government analyses have raised concerns about the actual and potential risk of diversion of sensitive technologies through Hong Kong. These concerns center on China's use of Hong Kong to obtain sensitive technology illicitly and as a means to ship controlled technologies to other countries, as well as Hong Kong's general use as a transshipment point by third countries. The key question is to what extent the risks will increase after reversion. Some U.S. officials are concerned that diversions will increase, given China's sovereignty over Hong Kong. Hong Kong officials maintain that China's desire to see Hong Kong continue to succeed economically will restrain such activity.

Some evidence exists of Chinese efforts to obtain controlled technology illicitly from Hong Kong. For example, following a U.S. seizure of 12 image intensifier tubes (a type of optical sensor), Hong Kong Customs determined that an additional 81 tubes had been shipped to Hong Kong and then diverted to China.¹⁴ Chinese "front companies" in Hong Kong have been identified with efforts to acquire controlled technologies for illicit export to countries of proliferation concern, according to U.S. and Hong Kong government officials. Hong Kong officials said that their government has some Chinese companies on its watchlist that it suspects of diverting controlled technologies from China through Hong Kong.

U.S. officials also have emphasized the significance of Hong Kong as a transshipment point where the large quantities of goods that transit the territory afford an opportunity for illegal diversions to other parts of the

¹²See our report, Export Controls: Some Controls Over Missile-Related Technology Exports to China Are Weak (GAO/NSIAD-95-82, Apr. 17, 1995).

¹³We reported on the diversion of machine tools shipped to three locations in China in Export Controls: Sensitive Machine Tool Exports To China (GAO/NSIAD-97-4, Nov. 19, 1996).

¹⁴According to U.S. Customs Service records, this case resulted in convictions and fines for parties in Hong Kong and incarceration for individuals in the United States in late 1993.

world. The transshipment system is used by proliferators as a means to circumvent the export controls of countries that are members of nonproliferation regimes. Hong Kong and U.S. Customs officials identified several cases of attempts to divert controlled technologies through Hong Kong involving North Korea, Pakistan, Iran, Singapore, and others that occurred between 1993 and 1996. For example, in June 1994 a party in Singapore arranged to ship a coder and decoder system into Hong Kong for diversion to North Korea. Hong Kong Customs authorities intercepted and seized the system at the airport.

The actual harm to U.S. national security interests of technology diversions depends in part on the technology involved and its utility to China's military modernization efforts. Controlled dual-use technologies—including those eligible for "license-free" export to Hong Kong—have military applications that China might find attractive for its military modernization efforts. The Department of Defense has identified 21 key technological areas crucial for developing future weapons systems, including high-performance computing, composite materials, and biotechnology and flexible manufacturing. China is currently placing an emphasis on research and development related to many of these areas. The Commerce Department, in reviewing license applications, is also required to watch for items destined for China that would make a direct and significant contribution to developments in electronic and antisubmarine warfare, intelligence gathering, power projection, air superiority, and nuclear weapons and their delivery systems. Appendix I illustrates, for selected dual-use technologies available to Hong Kong on a license-free basis, their potential military usefulness for China's military modernization efforts.

In addition to the technologies addressed previously, high-performance computers have specific national security applications in nuclear weapons programs, cryptology, conventional weapons programs, and military operations, according to a 1995 study cosponsored by the Commerce and Defense Departments. For example, the design and development of advanced conventional weapons represent a significant area for computing, as does direct support of military operations. The availability of high-performance computers to countries of national security concern could upgrade their military capabilities, which in turn could adversely affect U.S. military operations.

The implementation of the tier 3 standards for the export of high-performance computers, as described earlier, is particularly

troublesome for China. China remains an authoritarian, centrally controlled government whose economy is dominated by state-owned enterprises and whose military is heavily involved in commercial activities. As such, the distinction between a civilian end user (that can obtain a computer of up to 7,000 MTOPS without a license) and a military end user (limited to computers of up to 2,000 MTOPS without a license) becomes blurred.

Monitoring Critical, but Difficulties May Exist in Ability to Track Nonlicensed Items

U.S. officials agree that monitoring Hong Kong's autonomy in the conduct of export controls is necessary, given the potential risks involved and the U.S. policy commitment to ensure that exports of sensitive technology to Hong Kong are adequately protected. U.S. and British government officials have suggested several means to monitor the continued autonomy of Hong Kong's export control system and to detect any evidence of China's involvement in the operations of Hong Kong's export control regime.

One such indicator would be changes in patterns of U.S.-controlled dual-use exports to Hong Kong, which could signal that China is attempting to acquire high technology items through Hong Kong. However, the U.S. government may have difficulty in effectively monitoring items that will continue to be exported to Hong Kong without a license. The only existing U.S. government sources of information on such exports are data that exporters provide using a shipper's export declaration (SED) or through automated filing systems—the methods the Customs Service and the U.S. Bureau of the Census routinely use to collect data on all U.S. exports of a certain value.¹⁵ Exporters are currently required to cite the category code that permits them to export an item on a no-license-required or license-exception basis.¹⁶ Regulations require exporters to maintain, for 5 years, records of transactions involving exports under any license or license exception and to provide such records to the Commerce Department upon request. Failure to comply with reporting and recordkeeping requirements is subject to sanctions and penalties as described in the regulations. A monthly-updated data base of export data is provided to Commerce staff to assist in enforcement efforts.

¹⁵Exporters are required to file documentation for shipments by mail valued at more than \$500 and for shipments by means other than mail valued at more than \$2,500; exporters must file for all shipments requiring an export license regardless of value.

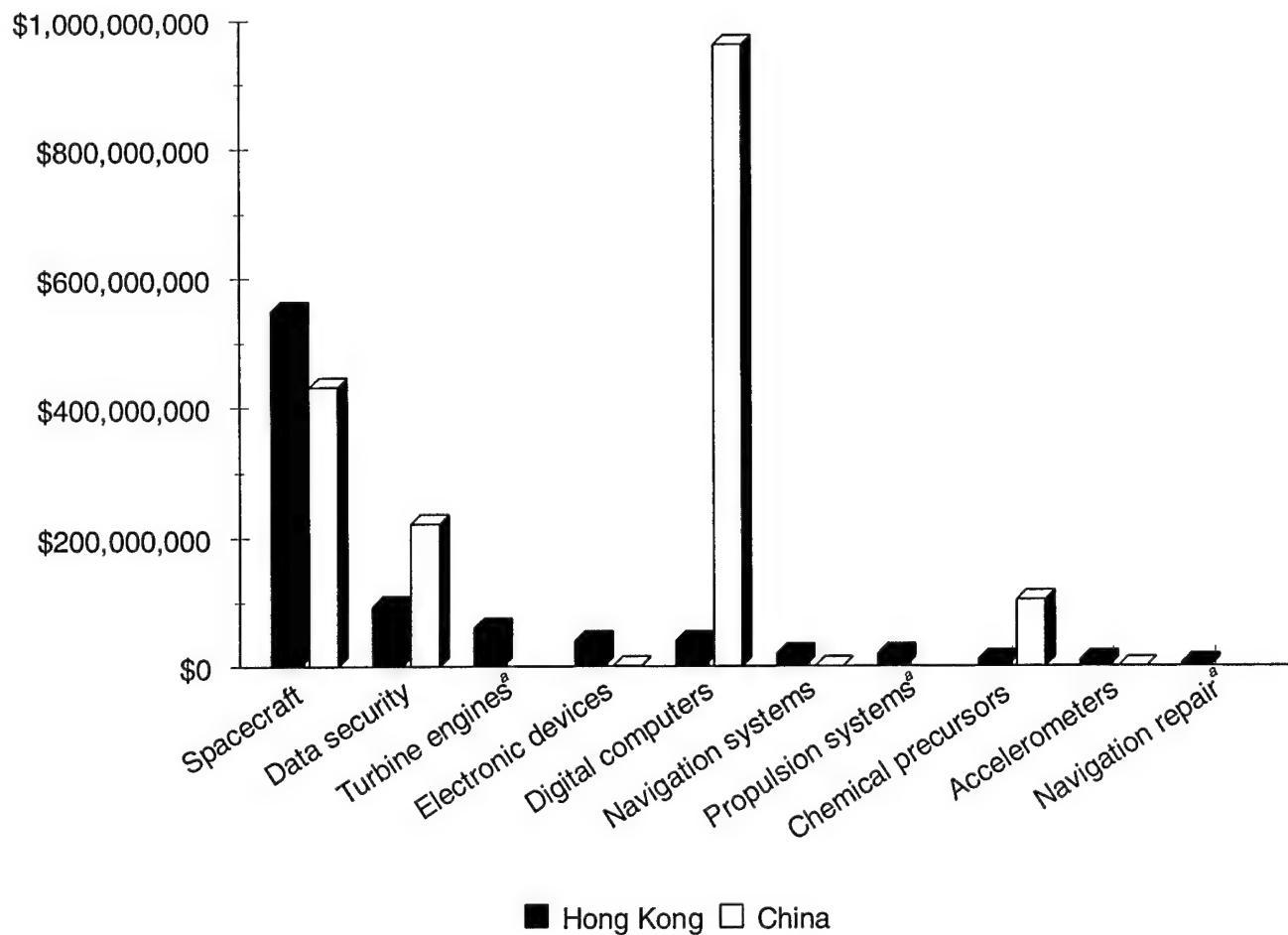
¹⁶With one exception: the current Export Administration Regulations do not require exporters to record category information when the item falls under the license exception for technology and software exports.

A January 1997 Census Bureau report found serious problems with the accuracy of some of the data on SEDs. The report noted that 50 percent of SEDs (which in turn represent about 35 percent of all reported exports) were in some way incomplete or inaccurate; Census has also reported that 25 percent of all export transactions contain errors that need correction. Because the Census report did not specifically assess the accuracy of the data field used to capture Commerce's controlled item categories and license exceptions, there is no way to determine whether these data suffer from similar rates of error. Customs is instituting a new system to replace SEDS—the online Automated Export System (AES)—that is intended to significantly improve data accuracy.¹⁷ However, AES is not mandatory and uncertainty remains over the number of companies that may participate voluntarily.

In the meantime, Commerce enforcement staff must rely on the existing data. No efforts have been made to systematically test the accuracy of the data on exports to Hong Kong. Moreover, no attempt has been made to construct a baseline against which to measure any changes in the types and volumes of items exported to the territory.

Tracking U.S. licensed items to Hong Kong and China also could serve as an important indicator of any shifts in exports of sensitive technology. Data are readily available to establish baselines against which to measure changes after reversion, and the U.S. government has begun to assemble the basic data to track U.S. licensed exports to Hong Kong and China. Specific indicators to monitor could include (1) particular categories of items showing increased exports for Hong Kong and decreased exports for China and (2) license denials for China and any changes in corresponding categories of exports to Hong Kong. Figure 2 illustrates one type of baseline—the top 10 categories for Hong Kong for fiscal years 1994 through 1996, compared to the same categories for China.

¹⁷We are currently reviewing Customs' implementation of AES, including the extent to which AES will improve U.S. export data.

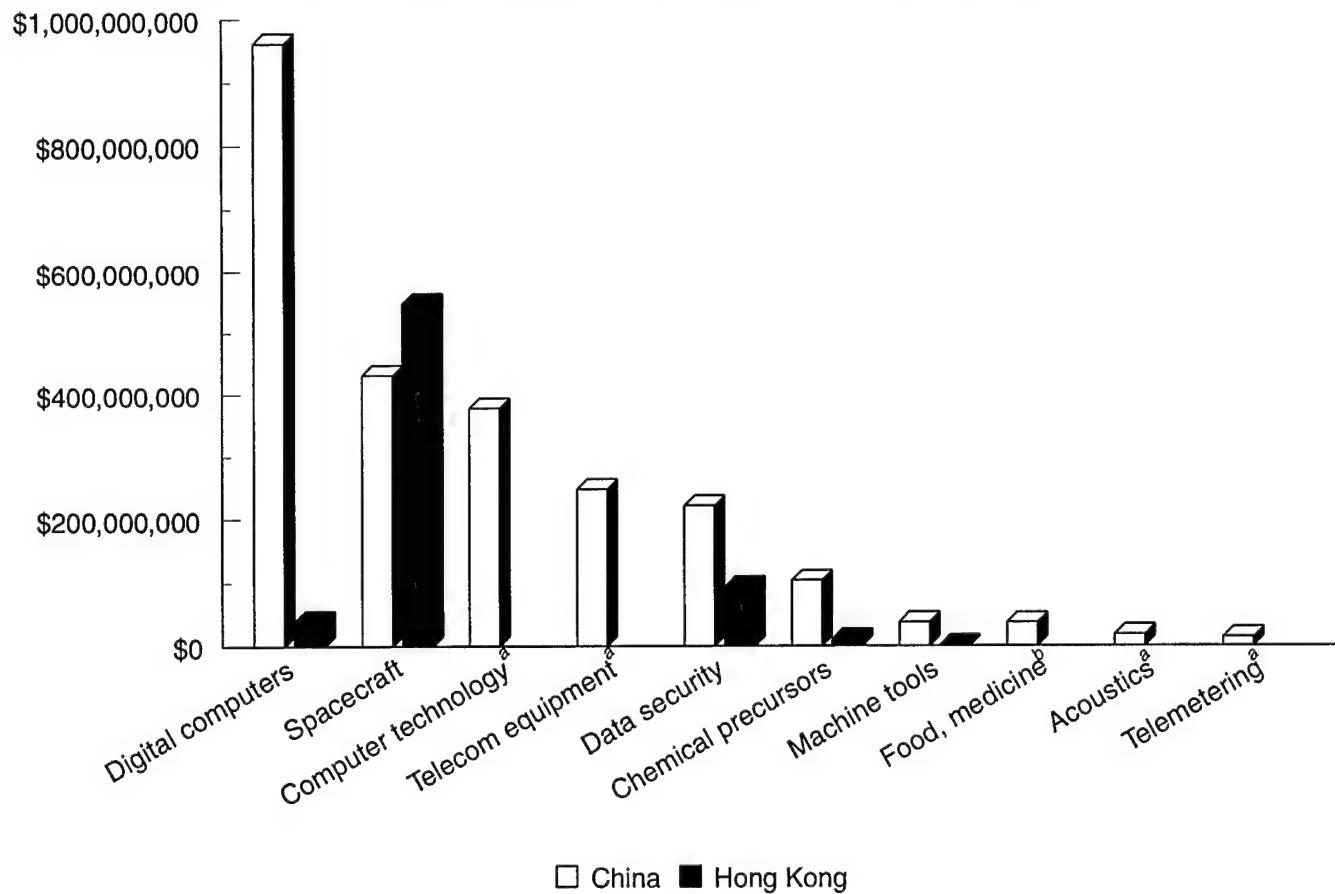
Figure 2: Highest Categories of Licensed Exports to Hong Kong Compared With China, Fiscal Years 1994-96

Note: Numbers for the categories listed are 9A004, 5A002, 9E003, 3A001, 4A003, 7A003, 9A003, 1C350, 7A101, and 7E003, respectively.

*Commerce licensed no items in these categories for China.

Source: Department of Commerce.

Similarly, figure 3 shows the top 10 categories of controlled items for China as compared with Hong Kong, which highlights the categories of items that may be exported to Hong Kong without a license.

Figure 3: Highest Categories of Licensed Exports to China Compared With Hong Kong, Fiscal Years 1994-96

Note 1: This list excludes licenses associated with categories 3B01 (semiconductor manufacturing equipment; total licenses valued at about \$110.9 million), 1B50 (vacuum or controlled environment furnaces; total licenses valued at about \$17.4 million), and 1B70 (chemical weapons production equipment; total licenses valued at about \$25 million) because Commerce replaced these with multiple new categories and we were unable to allocate license data among them.

Note 2: Numbers for the categories listed are 4A003, 9A004, 4E002, 5A001, 5A002, 1C350, 2B001, 0A95, 6A001, and 5A101, respectively.

^aMost items in these categories required no prior U.S. government review before export to Hong Kong.

^bCommerce licensed no items in this category for Hong Kong.

Source: Department of Commerce.

Changes in export trends may not, by themselves, represent evidence of attempts to acquire technology illicitly. Increases in certain high-technology exports to Hong Kong could be due, for example, to the Hong Kong government's encouragement of technology-driven economic growth. Thus, changes in any baseline would signal the need for further analysis and checking.

Another means to monitor Hong Kong's continued autonomy in export controls involves pre-license checks (PLC) to determine the legitimacy of proposed end users and post-shipment verifications (PSV) to verify shipments after licenses have been granted. Defense and Commerce Department officials have suggested that these checks could be increased to test the Hong Kong government's continued willingness to provide transparency and to obtain more information on the status of particular exports. The Hong Kong government has stated that it will continue to cooperate with the U.S. government in the conduct of PLCS and PSVs.

The U.S. government has had much greater success in conducting PLCS in Hong Kong than in China. The Hong Kong government supports PLCS, while the Chinese government limits them, as evidenced by the numbers of such checks that have been canceled. Data are readily available on PLCS and PSVs to provide a baseline against which to measure changes in Hong Kong's autonomy, as shown in table 2.

Table 2: Comparison of Number of PLCS for Hong Kong and China, Fiscal Years 1994-96

PLCs	Hong Kong		China	
	Number	Percent	Number	Percent
Completed	23	74.2	25	22.7
Canceled	8	25.8	85	77.3
Total	31	100	110	100

Source: Department of Commerce.

The ability to conduct PSVs after reversion will also provide a useful indicator of the continued autonomy of Hong Kong's export control system. Currently, Hong Kong allows the United States to perform post-shipment verifications of deliveries of U.S. exports, but China does not. During the past 2 years, the U.S. government conducted a total of 35 PSVs in Hong Kong but none in China.

U.S., British, and Hong Kong government officials also suggested other potential indicators of changes in Hong Kong's autonomy:

SED reviews. Commerce Department officials conduct on-site reviews of selected SEDs at U.S. ports prior to the export of goods. The officials review numerous transactions before selecting a smaller target group for closer scrutiny. Commerce also conducts a systematic review at headquarters of SEDs after shipments have occurred. Commerce officials advised us that the number of such reviews could be increased or refocused more directly on Hong Kong exports.

Changes in government personnel. Shifts in key positions beyond those resulting from normal staff rotation could signal a diminished commitment to export controls. However, U.S. Consulate General officials indicated that identifying and assessing changes that were unusual would be judgmental.

Problems in liaisons with Hong Kong representatives. Changes in the Hong Kong government's responsiveness to information on illicit shipments through the territory, for example, could be an adverse signal. While instances of reduced Hong Kong cooperation could be empirically determined, attributing such problems to changes in Hong Kong's autonomy would require analysis and judgment, according to U.S. government officials.

Prosecutions of criminal cases. A decline in numbers of Hong Kong government prosecutions for export control violations might presage a change in Hong Kong's autonomy. Data to construct a baseline would be readily available.

Passage of new export control legislation. "Brokering" legislation was introduced in the Hong Kong Legislative Council in April that would allow the prosecution of middlemen making illegal deals involving controlled items that may not even enter Hong Kong. Enactment of this law would be a good indicator of the Hong Kong government's continued commitment to a strong export control system.

The U.S. government interagency working group established to coordinate policy on Hong Kong completed a classified study in January 1997 that designated benchmarks for monitoring whether changes have occurred that affect the autonomy of Hong Kong's export control system. According to State and Commerce officials, lead agencies will collect data on the various benchmarks and meet periodically to review the data and make assessments.

U.S. government officials recognize that monitoring the effectiveness of Hong Kong's export control system and detecting diversions will be a challenge. The Consulate General in Hong Kong is tasked with monitoring a wide array of issues and staff are spread thin, according to Consulate and other U.S. government officials. Consulate officials also believe that individuals operating outside direct Chinese government control will be very difficult to detect and, even with continued Hong Kong cooperation, the U.S. government will not be able to detect everything.

As provided by the Hong Kong Policy Act, should the President determine that Hong Kong is not sufficiently autonomous to justify different treatment from China under the export control laws, he may change the way in which these laws are applied to Hong Kong. The State Department's Deputy Assistant Secretary for Export Controls has stated that the United States would not prejudge the situation in advance of monitoring efforts. She declined to identify specific changes that might trigger either a presidential determination under the act or a change in U.S. export control procedures for Hong Kong. She further commented that a whole series of areas will be monitored and any one change might be sufficient if it seriously affected the autonomy of Hong Kong.

Alternatively, a number of smaller changes in a variety of areas might add up to a significant loss in effectiveness. According to Defense Department officials, there are many variables to consider in reaching such a decision, and the decision itself will be subjective. They noted that it might be difficult to assess whether Hong Kong's autonomy had been reduced if a series of minor events occurred.

Recommendations

We recommend that the Secretary of Commerce establish appropriate baselines to monitor trends in controlled items exported to Hong Kong and China after Hong Kong's reversion to Chinese sovereignty. To accomplish this, we further recommend that the Secretary of Commerce, working with the Commissioner of the Customs Service, systematically assess data already filed by exporters, particularly information on license exceptions and controlled item category numbers, to determine whether the data are sufficiently complete and accurate to monitor trends in exports of nonlicensed controlled items to Hong Kong. If the export data cannot be relied upon for monitoring purposes, the Secretary of Commerce, in consultation with the Commissioner of Customs, should assess the causes for the problems and initiate corrective actions.

Agency Comments and Our Evaluation

The Departments of Commerce, State, and Defense, the U.S. Customs Service, and the Hong Kong government provided written comments on a draft of this report. The Departments of Commerce, State, and Defense agreed with the information and analyses in the report. Commerce also agreed with our recommendation to develop appropriate baselines to monitor accurately the potential risk to U.S. national security interests and stated that it is working with other agencies to develop such baselines.

The U.S. Customs Service observed that it has controls in place to monitor "licensable" shipments destined for all countries, including Hong Kong. Customs specifically cited its periodic inspections to identify controlled items lacking proper Commerce or State licenses, its reviews of ship manifests to detect suspect shipments, and its Automated Export System to track manifests and SEDS for shipments destined for Hong Kong. Our primary concern, however, is that the U.S. government will have difficulty in tracking items that are eligible for export to Hong Kong without a license—a concern that Customs did not specifically address in its comments. Furthermore, less than 1 percent of all U.S. exports are actually inspected, according to Customs officials, and the results of the Census Bureau's 1997 study suggest that there are considerable inaccuracies in SEDS. This, in turn could adversely affect Customs' ability to inspect nonlicensed export shipments to Hong Kong. Moreover, to date, AES is being used in only a very limited capacity, and questions remain about the numbers of exporters that will choose to use this system.

Commerce noted that it will be difficult to gather sufficient data on exports of items to Hong Kong that do not require a license, and that, given our findings on SED data accuracy, the Department has reservations about overly relying on such data in the short term. Commerce pointed out that, in addition to data on nonlicensed exports, the U.S. government has other corollary information that will serve as important indicators of the risk to U.S. interests, including monitoring of such areas as Hong Kong's cooperation with PLCS and PSVS, prosecutions, seizure rates, and changes in enforcement and export licensing personnel.

In its comments, the Hong Kong government emphasized its commitment to an effective export control system, backed up by comprehensive and up-to-date legislation, stringent licensing requirements, rigorous enforcement, and international support. In the Hong Kong government's view, Hong Kong's "clear autonomy" in the area of export controls, in accordance with provisions of the Basic Law, provides a solid basis for the

U.S. government's policy of treating Hong Kong separately from China in the continued export of sensitive technologies.

The Hong Kong government does not believe there should be any questions about Hong Kong's ability to maintain an independent control system after reversion, noting the strong constitutional, legal, and practical foundation on which its system is built. The Hong Kong government also stressed the need for Hong Kong's trading partners to continue their present liberal export control policies toward Hong Kong and warned against restrictive actions that run the risk of undermining Hong Kong's system to the detriment of Hong Kong's development and the broader cause of global nonproliferation. Further, the Hong Kong government saw no need for the U.S. government to institute specific baselines to monitor Hong Kong's controls, given the transparency of Hong Kong's system, and cautioned against instituting actions based on "unilateral statistics." The Hong Kong government also commented on other specific potential monitoring indicators.

As we have noted, the effectiveness of Hong Kong's current export control system was a key factor in the U.S. government's decision to continue existing export control policy toward Hong Kong after its reversion to China. The central issues are how well that system can be preserved after reversion and how well the U.S. government will be able to detect any changes that signal a weakening of the system. Various factors—including China's overall proliferation record and evidence of Chinese efforts to obtain controlled technology illicitly from Hong Kong—raise questions about the level of increased risk that the United States may be incurring in continuing to export sensitive technologies to Hong Kong after reversion. We therefore believe the U.S. government should monitor exports of sensitive U.S. technologies to both Hong Kong and China to ensure that such technologies continue to be protected as called for in the Hong Kong Policy Act.

Comments from the Departments of Commerce, State, and Defense, the U.S. Customs Service, and the Hong Kong government are presented in appendixes II, III, IV, V, and VI, respectively. The State and Defense Departments also provided technical comments and these have been incorporated in the report as appropriate.

Scope and Methodology

To determine how U.S. export control policies and procedures are currently applied to Hong Kong as compared with China, we reviewed U.S.

export control regulations governing licensing of dual-use and munitions items. We analyzed these regulations to identify which dual-use categories allow items to be exported to Hong Kong without licenses or prior government review, but not to China. We discussed our analysis and application of U.S. export control policy and regulations with officials of the Departments of State, Defense—especially the Defense Technology Security Administration—and Commerce and the U.S. Arms Control and Disarmament Agency. To identify and compare historical patterns of U.S. exports of controlled items to Hong Kong and China, we obtained data from the Commerce Department's licensing data base to determine which license applications were approved, denied, and returned without action for both Hong Kong and China during fiscal years 1994 through 1996. We also analyzed license applications for exports to China that were denied to determine whether the items on these applications could have been exported to Hong Kong without a license. We prepared a preliminary list of such cases and had the Commerce Department validate this list. To determine if any items denied for China were actually licensed for Hong Kong, we searched data from Commerce's data base to identify matches in item descriptions. As these matches were done on a text field from two separate files of item descriptions, only an exact match of the text language in each field would identify the "same" items. However, using the criterion of an exact match does not indicate the extent of identified items, given that identical items may be described differently in the data base. Therefore, the actual number of items that were denied for China but exported to Hong Kong could be much greater than our methodology allowed us to identify. We did not independently verify the accuracy of the data base from which we obtained data for use in our analyses.

We obtained information from the Defense Intelligence Agency on the military and proliferation significance of dual-use categories of items that do not require licenses for export to Hong Kong. We also obtained a list of authorized U.S. munitions exports to Hong Kong and China from the State Department's Office of Defense Trade Controls.

Assessing differences in application of export controls toward Hong Kong and China also required us to obtain and review documents, such as papers presented at two nonproliferation conferences held in Washington, D.C., and Tokyo, Japan, which showed regime policies, restrictions, and obligations for Hong Kong, China, and the United States. We interviewed officials from several U.S. government agencies, including the State Department's Bureau of Political-Military Affairs, the Commerce Department's Bureau of Export Administration, the U.S. Customs Service,

intelligence agencies, the Office of the Secretary of Defense and Defense Technology Security Administration, and the U.S. Consulate General in Hong Kong, for their analyses and views.

To determine U.S. export control policy toward Hong Kong after reversion and the rationale for the policy, we reviewed the provisions of the United States-Hong Kong Policy Act of 1992 and statements and testimony of State Department officials on the act and on U.S. policy. In addition, we reviewed over 60 State Department cables concerning Hong Kong, nonproliferation, and the reversion and two studies prepared by an interagency working group on these issues. We also reviewed laws, regulations, investigative case files, and data base information concerning Hong Kong's export control and enforcement system obtained from both the U.S. government and the Hong Kong government's Trade and Industry Branch, Trade Department, and Customs and Excise Department to gain an understanding of the operation of Hong Kong's export control system. To obtain assessments of the effectiveness of Hong Kong's system and the nature of cooperation with U.S. authorities, we interviewed U.S. officials in Hong Kong and Washington, D.C. Additionally, we reviewed documents and discussed with Hong Kong officials current and planned actions to preserve and improve Hong Kong's current system. To learn how other key governments plan to treat Hong Kong after reversion and what impact these plans might have on U.S. policy, we interviewed officials of the United Kingdom and Japan and cabled the government of Australia with specific questions. Information on foreign laws in this report does not reflect our independent legal analysis but is based on interviews and secondary sources.

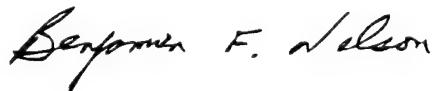
To assess the risks to U.S. nonproliferation interests posed by reversion, and the need for U.S. safeguards and monitoring efforts to protect such interests, we interviewed U.S., British, and Hong Kong officials in Hong Kong and Washington, D.C. Specifically, we discussed the officials' views on continued Hong Kong autonomy after reversion and the risks of (1) China's diverting U.S. technology from Hong Kong and (2) China or other parties using Hong Kong as a conduit for illicit high-technology transfers. We also reviewed interagency studies, cables, and memorandums on Hong Kong and export controls. Furthermore, we discussed with officials of the State, Commerce, and Defense Departments, the Customs Service, and the Census Bureau, current and planned U.S. capabilities to provide data to assist in monitoring changes in Hong Kong's autonomy, export patterns, and export control effectiveness.

In addition, we reviewed a 1997 Census Bureau report that discussed existing and planned data bases for export information.

We conducted our review between September 1996 and April 1997 in accordance with generally accepted government auditing standards.

As agreed with you, we plan no further distribution of this report until 10 days from the date of the report, unless you publicly announce its contents earlier. At that time we will send copies of the report to the Secretaries of State, Defense, and Commerce; the Commissioner of Customs; representatives of the Hong Kong government; and other appropriate congressional committees. We will also make copies available to others on request.

Please contact me on (202) 512-4128 if you or your staff have any questions concerning this report. Major contributors to the report are listed in appendix VII.



Benjamin F. Nelson
Director, International Relations and
Trade Issues

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Abbreviations

AES	Automated Export System
COCOM	Coordinating Committee for Multilateral Export Controls
MTOPS	millions of theoretical operations per second
PLC	pre-license check
PSV	post-shipment verification
SED	shipper's export declaration

Selected Categories of Items Requiring No Commerce License to Hong Kong: Associated Military Utility

Category number	Description	Military utility
1A001	"Composite" structures or laminates, except for two subcategories of items requiring licenses	Aerospace
1B002	Systems and components specially designed for producing controlled metal alloys, metal alloy powder or alloyed materials	Small engines
1B003	Tools, dies, molds or fixtures, for "superplastic forming" or "diffusion bonding" titanium or aluminum or their alloys, specially designed for the manufacture of aerospace and aircraft equipment and engines	Various structures (aerospace, naval, ground)
1C004	Uranium titanium alloys or tungsten alloys with a "matrix" based on iron, nickel or copper	Shaped charges for heavy penetrators/anti-armor materials
1C006	Fluids and lubricating materials	Precision production and hydraulics for weapons systems operating in temperature extremes
2A001 ^a	Ball bearings or solid roller bearings (except tapered roller bearings) having specified tolerances and standards	Precision components
2A002	Other ball bearings or solid roller bearings (except tapered roller bearings) having specified tolerances and other characteristics	Precision components
2A003	Solid tapered roller bearings having specified tolerances and standards	Precision components
2A004	Gas-lubricated foil bearing manufactured for use at specified operating temperatures and unit load capacities	Nuclear weapons production
2B001	"Numerical control" units, "motion control boards," specially designed for "numerical control" applications on machine tools, machine tools, and specially designed components. (Certain items within this category require licenses for nuclear proliferation reasons.)	Precision production of structures
2B002	Non- "numerically controlled" machine tools for generating optical quality surfaces	Precision production of structures
2B003	"Numerically controlled" or manual machine tools specially designed for cutting, finishing, grinding or honing specified classes of bevel or parallel axis hardened gears, and specially designed components, controls and accessories	Precision production of structures
2B008	Assemblies, units or inserts specially designed for machine tools, or for other controlled equipment	Precision production of structures
2B009	Specially designed printed circuit boards with mounted components, or "compound rotary tables" or "tilting spindles," etc., capable of upgrading equipment to controlled levels	Precision production of structures
3B001	"Stored program controlled" equipment for epitaxial growth	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection

(continued)

Appendix I
Selected Categories of Items Requiring No
Commerce License to Hong Kong:
Associated Military Utility

Category number	Description	Military utility
3B002	"Stored program controlled" equipment having specific characteristics designed for ion implantation	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
3B003	"Stored program controlled" anisotropic plasma dry etching equipment	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
3B004	"Stored program controlled" plasma enhanced chemical vapor deposition equipment	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
3B005	"Stored program controlled" automatic loading multi-chamber central wafer handling systems for vacuum environments	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
3B006	"Stored program controlled" lithography equipment	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
3B007	Masks or reticles	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
3B008	"Stored program controlled" test equipment, specially designed for testing semiconductor devices and unencapsulated dice	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
3C001	Hetero-epitaxial materials consisting of a "substrate" with stacked epitaxially grown multiple layers	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
3C002	Resist materials, and "substrates" coated with controlled resists	Semiconductors with applicability to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
4A004	Computers, and specially designed related equipment, "electronic assemblies" and components, including "systolic array computers," "neural computers," and "optical computers"	Computers, and specially designed related equipment as applicable to air superiority, power projection, antisubmarine warfare, nuclear weapons, electronic warfare, intelligence collection
5C001	Preforms of glass or of any other material optimized for the manufacture of controlled optical fibers	Guidance systems, secure communications
6A001	Acoustics, including (1) marine acoustic systems, equipment and specially designed components and (2) correlation-velocity sonar log equipment designed to measure horizontal speed relative to the sea bed at distances between the carrier and the sea bed exceeding 500 m	Antisubmarine warfare, intelligence collection, electronic warfare
6A004	Optics, including (1) mirrors (reflectors); (2) components made from zinc selenide or zinc sulphide with a specific wavelength transmission range; (3) "space-qualified" components for optical systems, as specified; (4) optical filters, as specified; (5) optical control equipment, as specified; and (6) "fluoride fiber" cable, as specified	Optics as applicable to guidance systems, image intensifiers/low light level TV
6B004	Optics equipment for measurement	Optics as applicable to guidance systems, image intensifiers/low light level TV

(continued)

Appendix I
Selected Categories of Items Requiring No
Commerce License to Hong Kong:
Associated Military Utility

Category number	Description	Military utility
6C002	Optical sensors, as specified	Guidance systems
6C004	Optics, as specified	Guidance systems
6C005	Synthetic crystalline "laser" host material in unfinished form	Laser range finders, laser weapons
8A001	Submersible vehicles or surface vessels	Antisubmarine warfare, intelligence collection
8A002	Systems or equipment for submersible vehicles	Sensor and control systems for submersibles as described in 8A001
8B001	Water tunnels meeting certain specifications, designed for measuring acoustic fields generated by a hydro-flow around propulsion system models	Design of submersibles
9A002	Marine gas turbine engines with specified standards and specially designed assemblies and components	Warships, submersibles (power projection, antisubmarine warfare)
9A003	Specially designed assemblies and components, incorporating any of the technologies controlled by 9E003.a, for gas turbine engine propulsion systems	Warships, submersibles (power projection, antisubmarine warfare)

^aQuiet running bearings in this category are subject to State Department licensing.

Source: Department of Commerce's Bureau of Export Administration and Defense Intelligence Agency analyses.

Comments From the Department of Commerce



THE SECRETARY OF COMMERCE
Washington, D.C. 20230

MAY 12 1997

Mr. Benjamin F. Nelson
Director, International Relations
and Trade Issues
National Security and International Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Nelson:

We appreciated the opportunity to review and comment on your draft report on the implications of Hong Kong's reversion to China in terms of U.S. nonproliferation interests. In general, we found the report to be a thorough and accurate review of U.S. export control policies towards Hong Kong, and the complex policy issues that relate to Hong Kong's reversion to Chinese rule on July 1, 1997. GAO has done an excellent job of making complex issues very clear. We commend you on a fine report.

We agree with the GAO recommendation that the Administration needs "appropriate baselines" to monitor accurately the potential risk to U.S. national security interests. We are working with other agencies to develop such baselines and to monitor them during the transition period. We think that it will be difficult to gather sufficient data on the exports of items to Hong Kong that do not require a license for export. In view of GAO's own findings on Shipper's Export Declaration (SED) data accuracy, we have reservations about over-reliance on it in the short term as a means of monitoring changing trade patterns in Hong Kong.

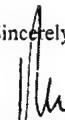
In addition to data on nonlicensed exports to Hong Kong, we have other corollary information which has proven to be as important an indicator of the risk to U.S. strategic interests. We have already begun work on the first GAO recommendation. We are working with a State Department-chaired working group to establish appropriate baselines to monitor trends in controlled commodities exported to Hong Kong after the territory's reversion to Chinese sovereignty. The United States is looking at a wide range of factors, items, and activities related to the export of strategic items to Hong Kong. Monitoring of Hong Kong's cooperation with pre- and post-licensing checks, enforcement cooperation, Hong Kong prosecutions, seizure rates, and changes in enforcement and export licensing personnel is also important. It is the sum of all of these measures that will give the U.S. Government the broadest possible basis on which to evaluate the risk to U.S. security interests.

Appendix II
Comments From the Department of
Commerce

The most difficult challenge we face in this area is determining the legitimacy of the end-user and assuring that the ultimate consignee uses the item in the approved end-use. This approach is not easily monitored and data is difficult to gather. Most of the U.S. Government export license denials to China are the result of unanswered or negatively answered questions about either the end-user or the end-use, not just because of the commodity or its quantity.

At your request, we have reviewed the draft and determined that it contains no inadvertent release of information whose disclosure is protected by §12(c) of the Export Administration Act.

Sincerely,



William M. Daley

Comments From the Department of State



United States Department of State

Chief Financial Officer

Washington, D.C. 20520-7427

May 9, 1997

Dear Mr. Hinton:

We appreciate the opportunity to review and provide (under separate transmission) Department of State comments on your draft report entitled "HONG KONG'S REVERSION TO CHINA: Effective Monitoring Critical to Assess U.S. Nonproliferation Risks," GAO/NSIAD-97-149, GAO Job Code 711213. Overall, the draft report presents an accurate picture of U.S. Export Control Policy toward Hong Kong.

The Department appreciates the effort your staff made in verifying and incorporating in spirit most of the changes that we suggested and provided to your staff earlier.

If you have any questions concerning this response, please contact Dr. Martha C. Harris, Bureau of Politico-Military Affairs, at (202) 647-6977.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard L. Greene".

Richard L. Greene

cc:

GAO - Mr. Nelson
STATE/PM - Dr. Harris
/PM/ATEC - Mr. Maertens

Mr. Henry L. Hinton, Jr.,
Assistant Comptroller General,
National Security and International Affairs,
U.S. General Accounting Office.

Comments From the Department of Defense



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

2400 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-2400



INTERNATIONAL
SECURITY AFFAIRS

07 MAY 1997

Mr. Benjamin F. Nelson
Director, International Relations
and Trade Issues
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Nelson:

This is the Department of Defense response to the General Accounting Office draft report, "Hong Kong's Reversion to China: Effective Monitoring Critical to Assess U.S. Nonproliferation Risks," dated 23 April 1997 (GAO Code 711213), OSD Case 1343. The Department of Defense concurs with the report.

Technical corrections to the report were provided separately. The Department appreciates the opportunity to comment on the draft report.

Sincerely,

Kurt M. Campbell
Deputy Assistant Secretary of Defense
for Asian & Pacific Affairs



Comments From the U.S. Customs Service



DEPARTMENT OF THE TREASURY
U.S. CUSTOMS SERVICE

May 5, 1997.

Mr. Benjamin F. Nelson
Director, International Relations
and Trade Issues
General Accounting Office
441 G Street, NW.
Washington, D.C. 20548

Dear Mr. Nelson:

The enclosed letter from the Office of Field Operations represents the U.S. Customs Service official consolidated comments on the General Accounting Office draft report entitled, "Hong Kong's Reversion to China, Effective Monitoring Critical to Assess U.S. Nonproliferation Risks" (GAO/NSIAD-97-149).

If you have any questions concerning these comments please contact Mr. Tony Del Moral at (202) 927-0957.

Sincerely,

A handwritten signature in black ink, appearing to read "William F. Riley".

William F. Riley
Director, Office of Planning

Enclosure

Appendix V
Comments From the U.S. Customs Service



DEPARTMENT OF THE TREASURY
U.S. CUSTOMS SERVICE

MAY 12 1997

FO:TA AWM

Mr. Benjamin F. Nelson
Director
International Relations
& Trade Issues
General Accounting Office
441 G Street, NW.
Washington, D.C. 20548

Dear Mr. Nelson:

The Office of Field Operations (OFO) would like to offer the following comments on the General Accounting Office (GAO) Draft Report entitled "Hong Kong's Reversion to China - Effective Monitoring Critical to Assess U.S. Nonproliferation Risks".

Currently, Customs has controls in place to monitor licensable shipments destined for all countries, including Hong Kong. Our Outbound Inspectors in the field, are very aware that Hong Kong is a known transit point for licensable shipments destined for the PRC and act accordingly. The OFO controls currently in effect for field inspectional personnel include:

- Periodic inspections are conducted by Customs Exodus and Outbound teams in warehouses containing freight, awaiting loading on vessels and aircraft, for destination to Hong Kong. These teams are looking for controlled material departing without the proper Office of Defense Trade Controls or Commerce License. If a suspect shipment is found, the material is placed on hold and referred to the Exodus Command Center for a license determination. Licensable material is subject to enforcement actions. These teams are small and do not exclusively target Hong Kong.

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Appendix V
Comments From the U.S. Customs Service

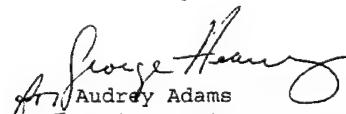
-2-

- o **Reviews of manifests are conducted by Customs Officers.** If a suspect shipment is found on review, Customs will request the carrier to detain the shipment at destination. The officer will conduct an inquiry using invoices, purchase orders and phone calls to the exporter. If the officer determines that the shipment requires an inspection, it can be returned to the United States at the exporter's expense. (Note: Under 19 Code of Federal Regulations (CFR) 4.75, vessels destined to Hong Kong may submit incomplete manifest and the Shippers Export Declarations (SED's) are not submitted to Customs until four days after the departure of the vessel.)
- o **The Automated Export System (AES) is used by Customs field personnel.** AES can be used by Customs to track sea manifests and SED's for shipments destined for Hong Kong. Currently, carriers and exporters are the only users who can add data to AES. OFO expects the AES system to be enhanced in time, so that it will provide a true, automated environment for all manifests, both sea and air, and as well as SED's.

In conclusion, the U.S. Customs Service has controls in place for monitoring licensable shipments to all countries, including Hong Kong and the PRC. These controls are not specific to each country. Additionally, limited automation capability, through the AES, is available to monitor licensable goods, and will be enhanced in the future.

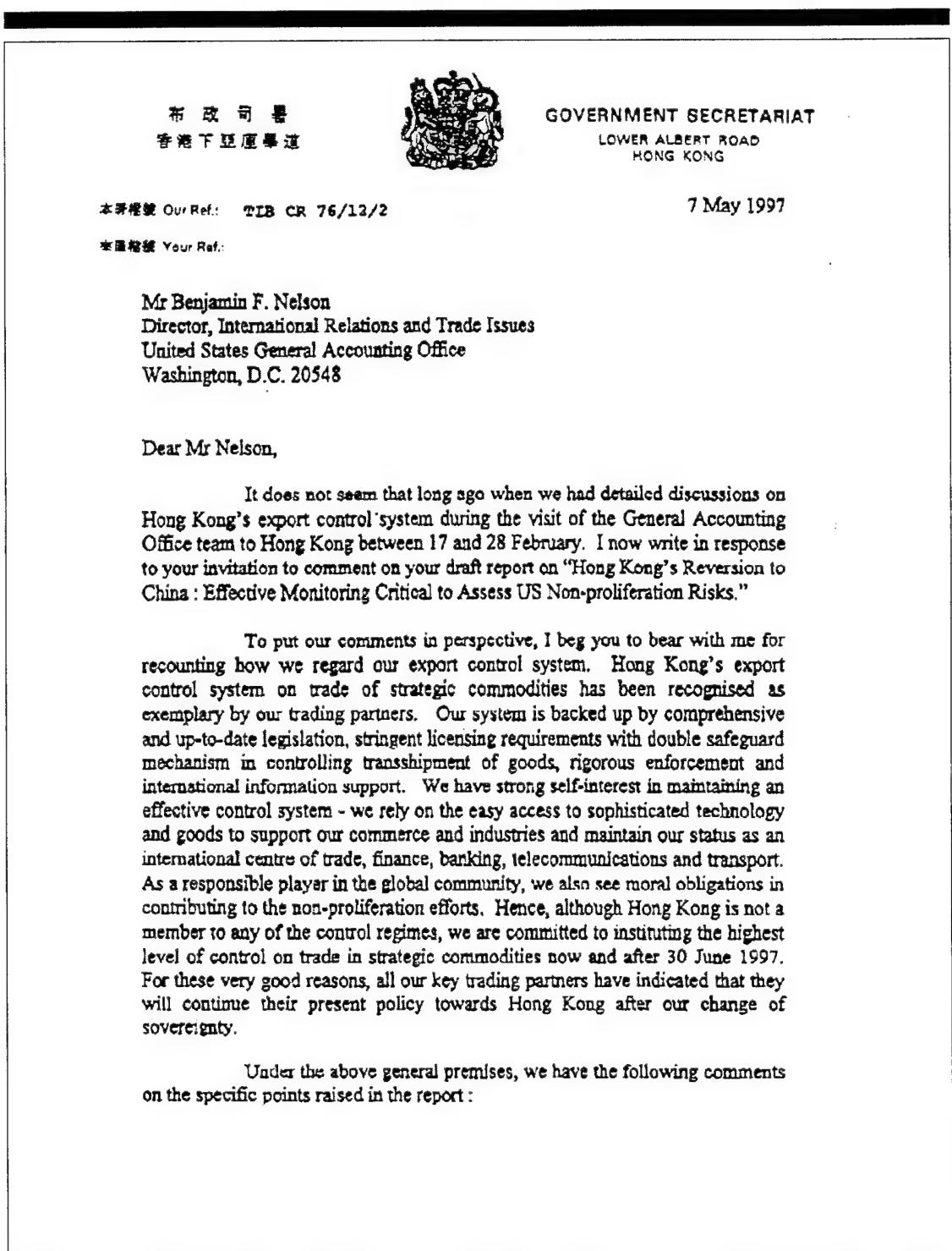
Should you require additional information or clarification on the information we have provided you, please contact either John D'Agostino at 927-7653 or Anthony Mazzoccoli at 927-0564.

Sincerely,


Audrey Adams
Acting Assistant Commissioner
Office of Field Operations

Comments From the Government of Hong Kong

Note: GAO comment supplementing those in the report text appears at the end of this appendix.



Now on p. 15.

(a) Hong Kong's continued autonomy in export controls
(page 22 of draft report)

Hong Kong has no doubt in its clear autonomy in the area of export controls in strategic commodity trade. Under Article 89 of the Joint Declaration and Article 116 of the Basic Law, the Hong Kong Special Administrative Region will remain a separate customs territory and will retain autonomy in the administration of its trading system, be it textiles, intellectual property protection or strategic commodity trade. Our legislation will remain in force after 30 June 1997 and will be implemented to the full to maintain the integrity of our control system. There has been no indication of interpretation to the contrary; indeed, Chinese officials have repeatedly affirmed our autonomy in the area of export controls. There is therefore solid basis for the United States-Hong Kong Policy Act to institute a policy of separate treatment of Hong Kong in the supply of sensitive technologies to Hong Kong.

(b) Hong Kong's commitment to exercising its autonomy in export controls
(page 22 of draft report)

Now on p. 15.

We take issue with the statement that "questions remain about Hong Kong's ability to maintain an independent export control system after reversion". Our ability to maintain an independent control system is built on strong constitutional, legal and practical fundamentals. Our constitutional position has been explained in the preceding paragraph. Legally, the rule of law committed us to implement our legislative controls impartially and we are committed to implementing them fully, without fear or favour. We have every confidence that our law enforcement will stand the change of sovereignty. Practically, our licensing and enforcement units are in good shape and there have been continuous efforts to improve the manpower resources and system support, for example, upgrading of our computer system, in the light of changing needs. Our record of successful investigation and conviction of companies breaching the law, irrespective of the country of origin of the companies or the goods, bears testimony to the effectiveness of our system. Our Customs officers will continue to take vigorous enforcement action against any persons or companies who violate our laws. As such, there is no ground to doubt Hong Kong government's ability or willingness to assert its autonomy in enforcing our controls.

But the success of our export controls in strategic commodity trade is a two-way street. Our efforts would not pay off if our trading partners would not render us the necessary co-operation. In this connection, we welcome State Department's affirmation of its continued support for Hong Kong's separate export control regime and to work closely with the Hong Kong government to fulfil that end. It is of vital importance that our trading partners should not pre-judge us and turn their doubts into restrictive actions. To do so would become a self-fulfilling prophecy in undermining our autonomy as pointed out pertinently by State Department officials.

Our transition is unprecedented and, understandably, filled with all sort of challenges. Only time will tell whether we honour our words but we must guard against doubts germinating into perceived realities.

(c) Baselines in Monitoring Hong Kong's Autonomy in the Conduct of Export Control
(pages 26 - 34 of draft report)

Now on pp. 18-24.

It is in Hong Kong's own interest to enforce stringent controls in the strategic commodity trade. We have strong motivation to continue our good and independent system. In this respect, our interests coincide with those of our trading partners. There have been well-established channels of co-operation with our major trading partners. As our system is totally transparent, we do not see any case for instituting Hong Kong specific baselines for monitoring our controls. Specifically,

- Monitoring of trends : we do not direct the market which is free to import and export commodities under the due process of law. We endorse entirely the observation made in page 31 of the draft report that changes in export trends may not, by themselves, represent evidence of attempts to acquire technology illicitly. We would advise extreme caution in instituting actions based on unilateral statistics.
- Increased pre-licence checks/post-shipment verifications/ shippers export declaration reviews : we fully agree that such checks are essential to prevent any illicit trade. That is why, in addition to export licensing, we impose licence requirement

on the import of strategic commodities as well. This unique feature allows us to keep track of imported goods and undertake disposal checks (our own post shipment checks) of goods effectively. Hong Kong will continue to co-operate with the United States in the conduct of pre-licence checks and post-shipment verifications. The high completion rate of pre-licence checks in Hong Kong as shown in the draft report speaks volumes about the intensity of such co-operation. The extent to which such checks and verifications should be conducted would naturally be dictated by various circumstances but the fundamental principle must be that they should not become *de facto* trade barriers and depart from the principle of continuing the current US policy for Hong Kong as set out in the United States-Hong Kong Policy Act.

- Changes in government personnel : changes are subject to operational needs and staff development considerations. Whilst frequent and abrupt changes should be avoided, we believe that it is equally, if not more, important to have an objective and automatic system which can withstand fluctuations in the human factors. This is in line with our strong adherence to the rule by law rather than rule by individuals. We believe this is also the case for our trading partners. And despite our impending transition, we have been enjoying high stability in the civil service at all levels.

- Problems in liaison with Hong Kong representatives : Hong Kong has been maintaining and is keen to continue to maintain close contacts with various overseas agencies in the exchange of information and intelligence. The relationship between the Hong Kong Customs and the US Customs has been excellent. There has been no evidence or suggestion of diminished co-operation on our part with overseas agencies. The last thing we want to see is a reduction in the level of co-operation with our trading partner. In this connection, we welcome visits from our trading partners and will continue to run inter-agency visits to promote mutual understanding. We share the observation in the report that unilateral interpretation of any acts would be subjective and judgmental.

- Prosecutions of criminal cases : obviously, as in any other places, we do not set ourselves numerical targets in conducting our enforcement actions. Ups and downs of prosecution figures can be due to many factors. The most important thing is that our enforcement agencies will continue to enforce the law vigorously and professionally.
- Passage of new export control legislation : it is part of our on-going programme to maintain the effectiveness of our controls by introducing new legislation as and when necessary. Our latest initiative is the introduction of the Weapons of Mass Destruction (Control of Provision of Services) Bill to broaden the scope of our controls to cover brokering activities. The Bill was introduced into our Legislative Council on 23 April 1997.

(d) Recommendation
(page 35 of draft report)

We welcome the close interest of our trading partners in Hong Kong's continued autonomy in export controls. We urge our trading partners to continue their present liberal export control policy towards Hong Kong and to keep an open and impartial dialogue with Hong Kong in the area of strategic commodity trade. We oppose any discriminatory action based on preconception instead of actual performance and evidence. Prejudices and unwarranted unilateral actions will run the risks of undermining our system which will only not be detrimental to Hong Kong's development, but will also negatively impact on the promotion of the global non-proliferation cause. We will continue to play our part constructively and hope our trading partners will continue to play their parts to the benefits of all.

(e) Other comments

(Page 15 of draft report)

The agreement referred to in the second line of the last paragraph is the Sino-British Joint Declaration which is an agreement between China and the UK.

Now on p. 24.

Now on p. 10.

Appendix VI
Comments From the Government of Hong Kong

6

(Page 25 of draft report)

Now on pp. 12 and 17.

See comment 1.

The intended destination of a shipment of rocket propellant mentioned in page 25 of the draft report should be Pakistan, not Middle East. The shipment is same as the one mentioned in page 18. This and another case mentioned in the report demonstrate clearly the effectiveness of our enforcement system and there is no evidence to suggest that Hong Kong is becoming a transshipment centre for illicit strategic commodity trade.

Yours sincerely,


(TAM Wing-pong)
Acting Secretary for Trade and Industry

(GAORES)

Appendix VI
Comments From the Government of Hong Kong

The following is GAO's comment on the Hong Kong government's letter dated May 7, 1997.

GAO Comment

1. We have substituted a different case (involving an attempted diversion by a Singapore entity to North Korea) to further illustrate efforts to use Hong Kong as a diversion point. The Pakistan diversion case is mentioned earlier in the report, on p. 12.

Major Contributors to This Report

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Richard Seldin

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